Job Loss Analysis

ID No: 1453582 **Status:** Closed

Original Date: 05/May/2009
Last Review Date: 18/May/2009

Organization:

SBU: GLOBAL MANUFACTURING
BU: ALL
Work Type: Technical (Process Engineering)
Title (Work Activity): Inspection of a piece of process equipment
Site/Region:

Personal Protective Equipment (PPE)	Selected	Comments
Proper PPE per your Refinery Guidelines	Y	
Additional Task Specific PPE		
Other		

Reviewers

Reviewers Name	Position	Date Approved
Johansen, Michelle L (MLMJ)	Manager	18/May/2009

Development Team

Development Team Member Name	Primary Contact	Position
Do, Liem V. (LDCV)	Y	Team Leader
Couzens, Ryan (RCJJ)	N	Process Engineer
Hogan, Paula L. (HOGP)	N	Process Engineer
Jones, Elen W. (ELEJ)	N	Process Engineer
Kolb, Jason C. (JCKO)	N	Team Leader
Lang, Brent M. (LBRE)	N	Process Engineer
Portingell, Suzanne (SPHW)	N	Process Engineer
Regan, Timothy (TRGW)	N	Process Engineer
Waterman, Andy P. (WATP)	N	Process Engineer
White, Malcolm S. (MSWH)	N	Manager

Job Steps

No	Job Steps	Potential Hazard	Critical Actions
1	Plan for Process Engineering Inspection	1a-d. Poor equipment performance due to wrong focus for inspection / critical inspection items missed	1a. Establish reason for inspection, 1b. Read over previous vessel history for watch points when inspecting 1c. Ensure inspection best practice guidelines have been consulted 1d. Involve appropriate personnel e.g. Lead Process Engineers, BIN team leaders, inspectors etc.
		1e-h. Inadequate equipment performance and defects not detected because of equipment installed incorrectly, poorly installed equipment not fixed or waste material interfering with equipment performance.	1e. Ensure drawings are correct and are the latest revision. 1f. Establish equipment installation tolerance 1g. Establish cleanliness requirements 1h. Obtain relevant equipment inspection templates to assist with inspection.
		1i-j. History of vessel performance not recorded accurately, critical measurements unable to be taken or delays / rework in vessel inspection.	1i. Ensure necessary equipment is available for inspection e.g. ruler, tape measure, torch, level measuring equipment, camera, sample containers, pens, pencils, documentation template. 1j. Ensure hole watchers / inspectors are available to avoid time delays.
		1k. Inadequate time to perform process engineering inspection	1k. Ensure that process engineering inspection of equipment has been factored into shut down schedule.

2	Initial Inspection	2a-c. Inadequate performance of equipment due to equipment not installed correctly. 2d-e. Equipment problems not detected due to due to poor visual inspection. 2f-h. Delays / re-work in performing vessel inspection.	2a. Required measurements taken 2b. Required visual inspections made 2c. Check existing components have been installed correctly 2d. Samples taken where necessary 2e. Detailed visual inspection made to detect additional problems 2f. Photos taken and findings recorded 2g. Non-process related findings recorded and reported. 2h. Write up initial inspection notes clearly and label all photos taken.
3	Revise work scope	3a. Equipment performance issues not addressed due to equipment problems detected in initial inspection not fixed.	3a. Develop recommendations for additional maintenance work 3b. Involve stakeholders / experts in making recommendations 3c. Check work list is amended
4	Intermediate Inspections	4a. Inadequate performance of process equipment due to detailed equipment checks on critical equipment not being performed. 4b. Inadequate performance of process equipment mid installation checks not being carried out.	4a. Perform equipment checks that cannot be done when equipment is not in clean condition e.g. distributor tests. 4b. Perform mid installation checks e.g. catalyst loading checks, inspections of equipment that cannot be accessed at final inspection stage. 4c. Revise work scope if necessary.
5	Final Inspection	5a. Equipment not re-installed correctly 5c-d. Waste material effects equipment performance. 5e-g. Details of past process engineering inspections not available.	5a. Check assembly of new components including taking measurements if necessary. 5b. Check metallurgy of new equipment where possible 5c. Ensure vessel is left in clean condition including nozzles on vessels. 5d. All equipment / waste material from maintenance removed 5e. Record any changes that have been made 5f. Take photos and make notes of condition of clean / fixed equipment 5g. Take records for updating of equipment drawings if necessary

6	Documentation	6a-c.Poor record of equipment history and details of past inspections not available.	6a. Record all findings and recommendations for the relevant piece (initial, final and any additional inspections made) in appropriate place e.g. equipment report, unit shut down report etc 6b. Ensure that an adequate level of detail is used when reporting findings and recommendations 6c. Ensure all photos are labeled including whether the photos show initial inspection condition or final inspection completion